



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,489	09/25/2006	Cyrill Linnot	0543-1016	1031
466 7590 09/01/2009 YOUNG & THOMPSON 209 Madison Street Suite 500 ALEXANDRIA, VA 22314			EXAMINER KEMMERLE III, RUSSELL J	
			ART UNIT 1791	PAPER NUMBER
			MAIL DATE 09/01/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/567,489

Applicant(s)

LINNOT ET AL.

Examiner

RUSSELL J. KEMMERLE III

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-44, 46-62 and 67-70 is/are pending in the application.
- 4a) Of the above claim(s) 46-62, 67 and 68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-44, 69 and 70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/US)
Paper No(s)/Mail Date 11 May 2009; 4 August 2009
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4 August 2009 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 69 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support in the specification as originally filed for the limitation of claim 69 that the area delimiting a usable portion of the wall delimits the whole usable portion of the wall was not found. If support for this limitation is found in the specification Applicants are invited to specifically indicate where such support could be found. The area indicated by Applicants as supporting this limitation in the previous

response (page 9 lines 23-25) appears to provide support for newly added claim 70, but not claim 69.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 34-44 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner (DE 10130186).

Wagner discloses a mold for slip casting a ceramic article where a slurry is poured into a porous body and an inflatable body is introduced into the slurry and inflated creating a hollow area in the ceramic being formed while a wall is delimited. This mold includes a permeable exterior portion as well as an impermeable interior portion (a liner). Wagner discloses a device holding the inner portion that could be considered a support (shown as reference number 9 in the figures) which appears to be made of a stiff material as it is able to support the liner against the pressure of the suspension until the green body is formed. Therefore, at least one area of the interior portion (the top where the support is present) would have sufficient inherent stiffness to delimit a wall of the preform while the slurry is cast in to the mold.

Wagner shows the support for the liner in contact with the exterior face of the liner, as opposed to current claim 34 which recites that the support is in contact with the interior face of the liner.

Wagner shows the liner attached to the inside of the support structure (that is, the support structure is in contact with the exterior of the liner) which is one of only two possible arrangements (that, or the support in contact with the interior of the liner as recited in claim 34). Thus, it would have been obvious to a person of ordinary skill in the art to try attaching the liner to the inside or outside of the support structure, as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp.

Referring to claim 35, Wagner shows the distance between the interior inflated body and the exterior mold as being close to constant across most of the mold (Fig 3). Since the term "substantially constant" is not defined in any greater detail by the current specification, this is assumed to meet the limitation of claim 35.

Referring to claim 36, while Wagner does not specifically disclose the dimensions of the ceramic article created, it would be within the ability of one of ordinary skill in the art to adjust the distance between the inner portion and the outer mold in order to create an article of the desired size according to methods commonly used and understood.

Referring to claim 37, Wagner discloses a slip casting type of mold, which one of ordinary skill in the art would understand means it would absorb liquid in a manner similar to plaster (and in fact often is plaster).

Referring to claim 38, the inner portion is described as balloon like and is inflated (deformed) to achieve the final shape used to form the body.

Referring to claim 39, the inner portion of Wagner is deflated (removed toward the interior) in order to remove it after the article is formed.

Referring to claims 41 and 43, it would be obvious to one of ordinary skill in the art that the inner portion should be made from a material which is inert to the slurry to prevent any reaction from occurring and resulting in undesirable properties in the article formed, and silicone is a material known to be inert to ceramic slurries and capable of the deformation required by Wagner.

Referring to claim 40, the selection of the materials discussed above would meet the limitations of claim 40.

Referring to claim 42, the inner portion of Wagner is removed by deflating which causes it to come unstuck from the article being formed.

Referring to claim 44, the inner portion of Wagner would inherently have to have an air injection hole in order to perform the inflation operation described.

Referring to claim 70, making the liner of Wagner separable would be well within the abilities of one skilled and obvious were it desired that the liner be able to be removed from the support. See *In re Dulberg*, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961) (The claimed structure, a lipstick holder with a removable cap, was fully met by the prior art except that in the prior art the cap is "press fitted" and therefore not manually removable. The court held that "if it were considered desirable for any reason to obtain access to the end of [the prior art's] holder to which the cap is applied, it would be obvious to make the cap removable for that purpose.").

Allowable Subject Matter

Claim 69 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Wagner does not disclose that the at least one area delimiting a useable portion of the wall delimit the whole useable portion of the wall (this "at least one area" being further defined in claim 34 as having sufficient inherent stiffness to delimit one wall of the preform when slurry is cast into the mold). The corresponding "at least one area" of

Wagner is considered to be the support structure, which delimits a portion of the internal wall structure, but not the whole useable portion of the wall.

Response to Arguments

Applicant's arguments filed 4 August 2009 have been fully considered but they are not persuasive.

Applicants first argue that Wagner fails to disclose that the support is in contact with the interior face of the liner. Applicants further argue that if the balloon like liner of Wagner were fixed on the external surface of the tube the pressure inside the balloon would tend to detach the balloon and that very secure means of fixing the balloon to the tube would be needed.

This is not found to be persuasive. As discussed above, one skilled in the art would find it obvious to try the only two positions for securing the balloon to the tube (inside the tube or outside) to achieve the predictable result of having the balloon attached to the tube.

Applicant's argument that extraordinary attachment means would be needed to hold the balloon on the outside compared to the inside of the tube is also not found to be persuasive. The balloon liner of Wagner would have to be secured to the tube in some manner to prevent it from coming off due to the pressure whether it was attached to the inside or the outside of tube. The attachment means for either one would be common among attachment means known to those skilled in the art.

Applicants further argue that the support means (tube of Wagner) must be rigid enough to support the liner, and that the support of Wagner does not hold or support the balloon so as to prevent collapsing.

This is not found to be persuasive because claim 34 recites that the support be "made of a material rigid enough to support the liner so as to prevent the slurry from causing the liner to collapse". The support of Wagner does appear to have this level of rigidity, as shown in Fig. 2 where the tube is inserted into the slurry and the tube does not collapse. It is not required by the limitations of claim 34 that the support prevents the collapse of the entire liner, only that where the support is present that it be rigid enough to prevent collapse due to the slurry. Wagner does appear to meet these limitations.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RUSSELL J. KEMMERLE III whose telephone number is (571)272-6509. The examiner can normally be reached on Monday through Thursday, 7:00-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. J. K./
Examiner, Art Unit 1791
/ Carlos Lopez/
Primary Examiner, Art Unit 1791